



Strategies and alliances into action to improve national collaboration

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NILDE : software & network for ILL

2001 : Nilde 1.0

- **7th ILDS Conference Liubljana and 1st Italian workshop
“Internet DD and inter-library cooperation”, Rome**

**2003 Bologna
2004 Pisa
2006 Napoli
2008 Bolzano**



**Italian workshops
From Nilde 1.0 to Nilde 4.0**

- **2007 10^o ILDS Conference Singapore**

2009 : Nilde 4.0 alpha test

- **11th ILDS Conference Hannover**

The Italian “scenario”

“The way we were”

Lack of national policies and quality standards delay in the setting up of a common national ILL

Small sharing service experiences organized geographically or thematically

Most of the libraries joining to the NILDE network were linked to scientific and biomedical research institutes

The Italian “scenario”

“The state of the art”

NILDE provides effective responses to daily needs of users

Italian Universities

Scientific Research Centers

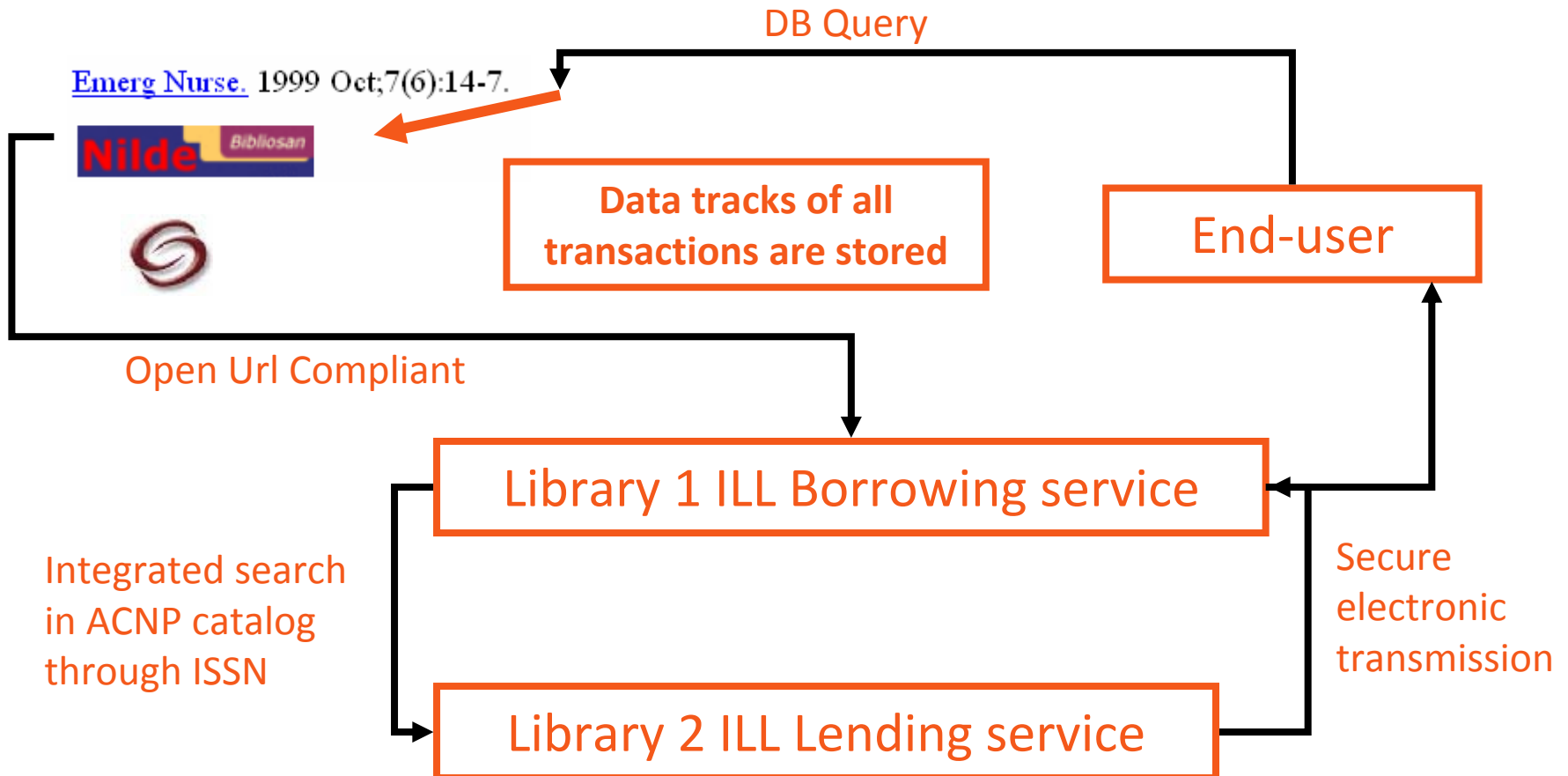
Health Care Centers

Public Libraries

Since 2006: increasing in adhesion requests the network has been changing more and more heterogeneously



Software for libraries and end-users



Few rules for best practice and high quality

A community heading towards user satisfaction

Reciprocally supply documents

Facilitate access to holdings

Supply documents as soon as possible

Supply documents at no charge but in case of strong imbalance between libraries

Equally distribute requests among all libraries



NILDE organization chart and goals

A tool for the network

Problem solving
Monitoring
Promotion & marketing



R&D

System management
Help-desk and technical support
Software development



Sharing Human Resources
and Processes



“One library one vote”

Librarians community choose CBN members

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Heading towards improvement...

Increasing libraries' adhesion

Obtaining end-users faithfulness

Rising standards quality

Aiming at software development

Finding stakeholders and enter into an alliance with them



NILDE Network Inter-Library Document Exchange

The scored goals

Focusing on main issues to improve quality standards

Best Practices vs Worst Practices

Training courses

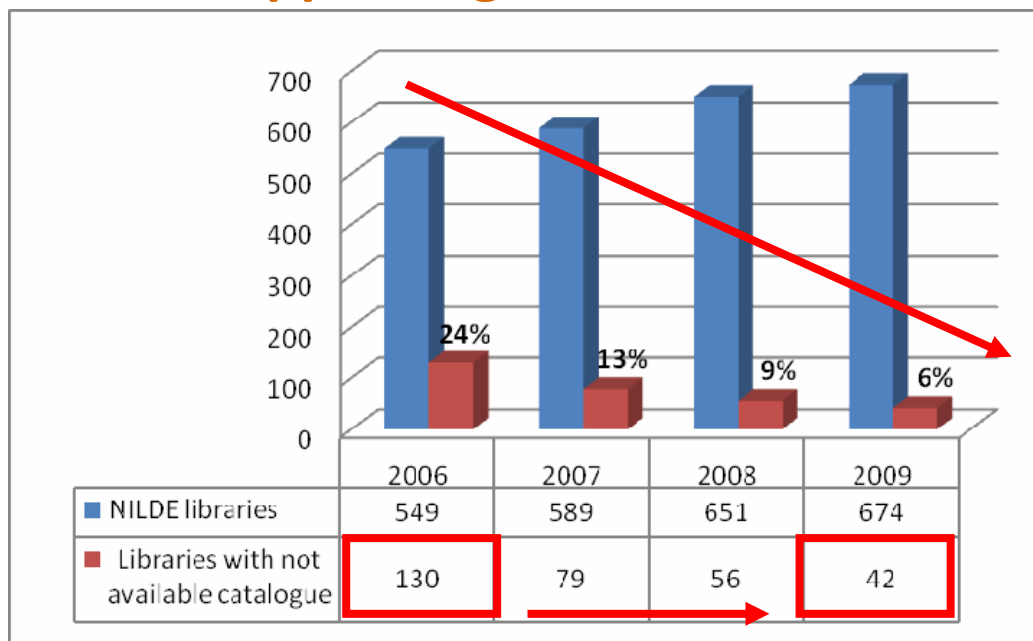
Technical workshops

Dissemination and promotion of Open Access journals and their presence in the national catalogs



The importance of sharing resources

Ghost libraries are mainly borrowing, they must reduce imbalance
Ghost libraries had been invited to respect rules and share their holdings
Ghost libraries are disappearing





Analysis of a complex system

Data analysis as a tool for improve standards

Do libraries work virtuously?

Do libraries fulfill rule standards?

Is there any imbalance between lending and borrowing?

Could be better to borrow or to subscribe to frequent request journals?

Are there any suggestions to consortia acquisitions we can extrapolate from transactions data?

Focusing on ILL data exchange

To reduce imbalance in a peer to peer network CBN analysed the following indicators

- reciprocity factor (RF)
- turn around time (TT)
- fill rate or success rate (SR)

To understand which titles libraries need, CBN identified

- how many journals involved in ILL transactions
- the high-used journals
- “the core journals”

ILL Data analysis and factor analysis

Elements of flexibility among libraries

- **Collections and users**
- **Differences in size**
- **Floating in adhesion to the network year by year**

suggest a careful approach in evaluating performances of the network

It's been necessary to group libraries into homogeneous clusters through factor analysis

Nilde indicators: Reciprocity Factor

We define “Reciprocity Factor” (RF)

$$RF = L/B$$

Where L/B is the ratio between the number of documents supplied to the network (L = Lending) and those requested (B = Borrowing) by the same library

The reciprocity factor RF allows an evaluation of the balance reached from any library, clusters of libraries or selected groups in terms of requested and supplied documents

1. $1 \leq RF$ documents supplied overcome requests
2. $0,6 \geq RF \leq 1$ completely or relatively balanced efficiency
3. $0,6 \geq RF \leq 0,4$ heterogeneous amount of libraries fluctuating between efficiency and debt
4. $0,4 \geq RF$ chronic imbalanced situation

Libraries having L=0 or B=0 have been excluded

Nilde indicators: Success Rate

We define “Success Rate” (SR) or “Fill Rate”

SR= Filled lending/total lending requests (%)

Where SR is ratio (expressed in percentage) between the number of documents supplied to the network (Filled Lending) and total lending requested received (all requests even not fulfilled) by the same library

High success rate means efficiency and reliability

Nilde indicators: Turn around Time

We define Turn around Time (TT)

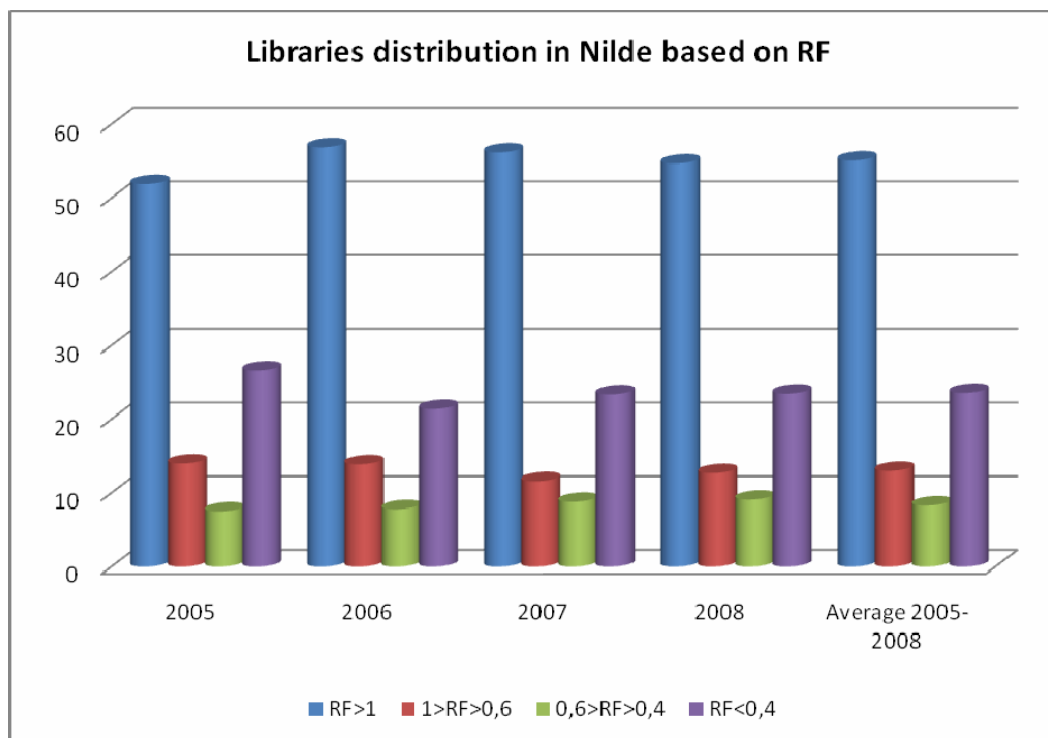
$$\text{TT} = \sum_{1-n} (\text{delivery date} - \text{request date}) / n \text{ (total requests)}$$

Where TT is total time (in average) between the reception of a lending request and its delivery, expressed in days, by the same library

A short TT means efficiency and high user satisfaction



RF and SR

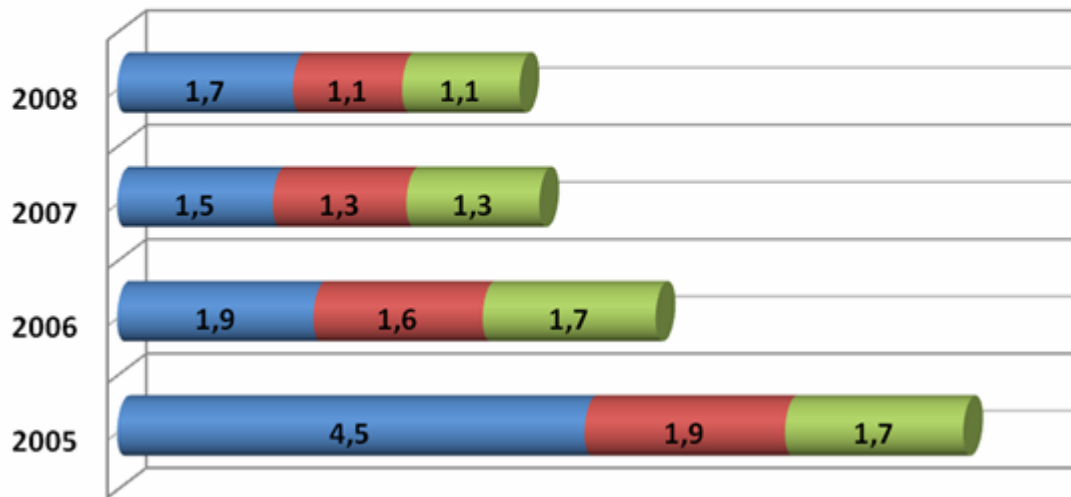


Libraries
398 (2005)
448 (2006)
491 (2007)
541 (2008)

During the four-year period, 2005-2008, distribution of the libraries on RF basis is constant
Success rate SR is constant too ($\approx 82\%$)

Nilde TT (turn around time) performance: all, worst100 & best100

■ worst100 ■ all ■ best100



TT trend

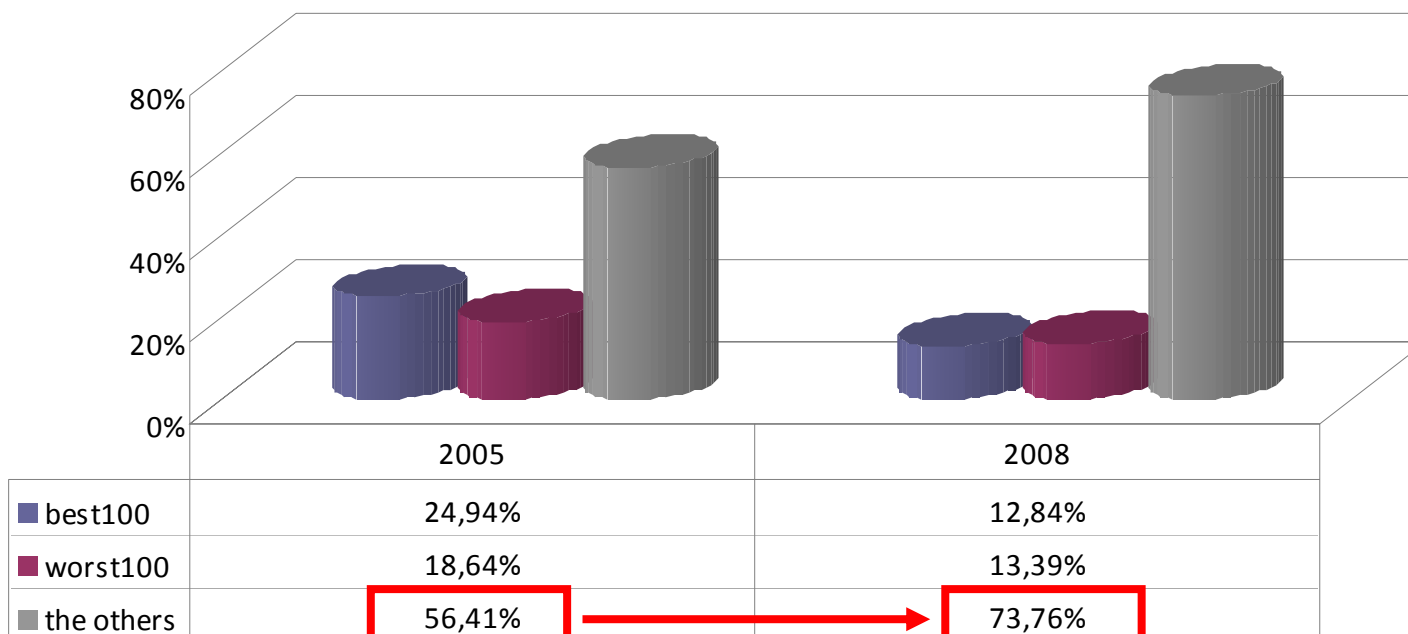
Timeliness	% documents delivered			
	2005	2006	2007	2008
1 day	43,20%	51,04%	60,53%	67,93%
1-2 days	35,50%	30,81%	24,26%	21,43%
2-3 days	8,08%	9,06%	9,48%	6,76%
≤3 days	86,78%	90,91%	94,27%	96,12%

Users main expectation is to get documents as soon as possible



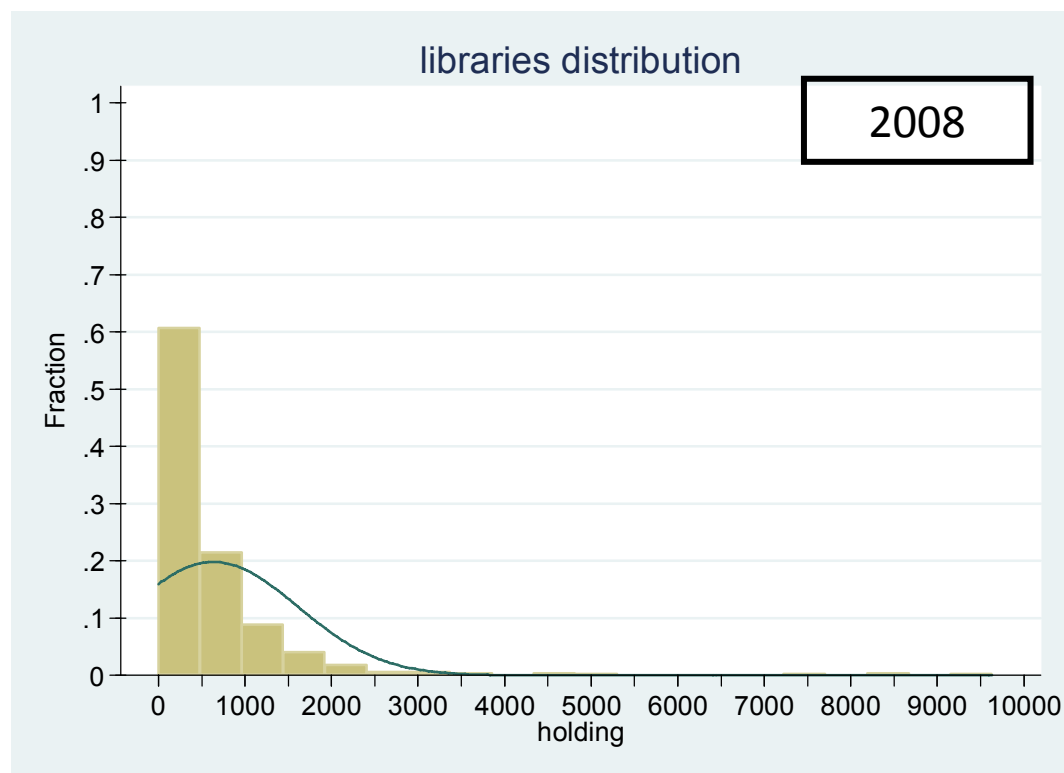
Distribution of ILL transactions

Total transactions (%) for best 100, worst 100 and the other Nilde libraries





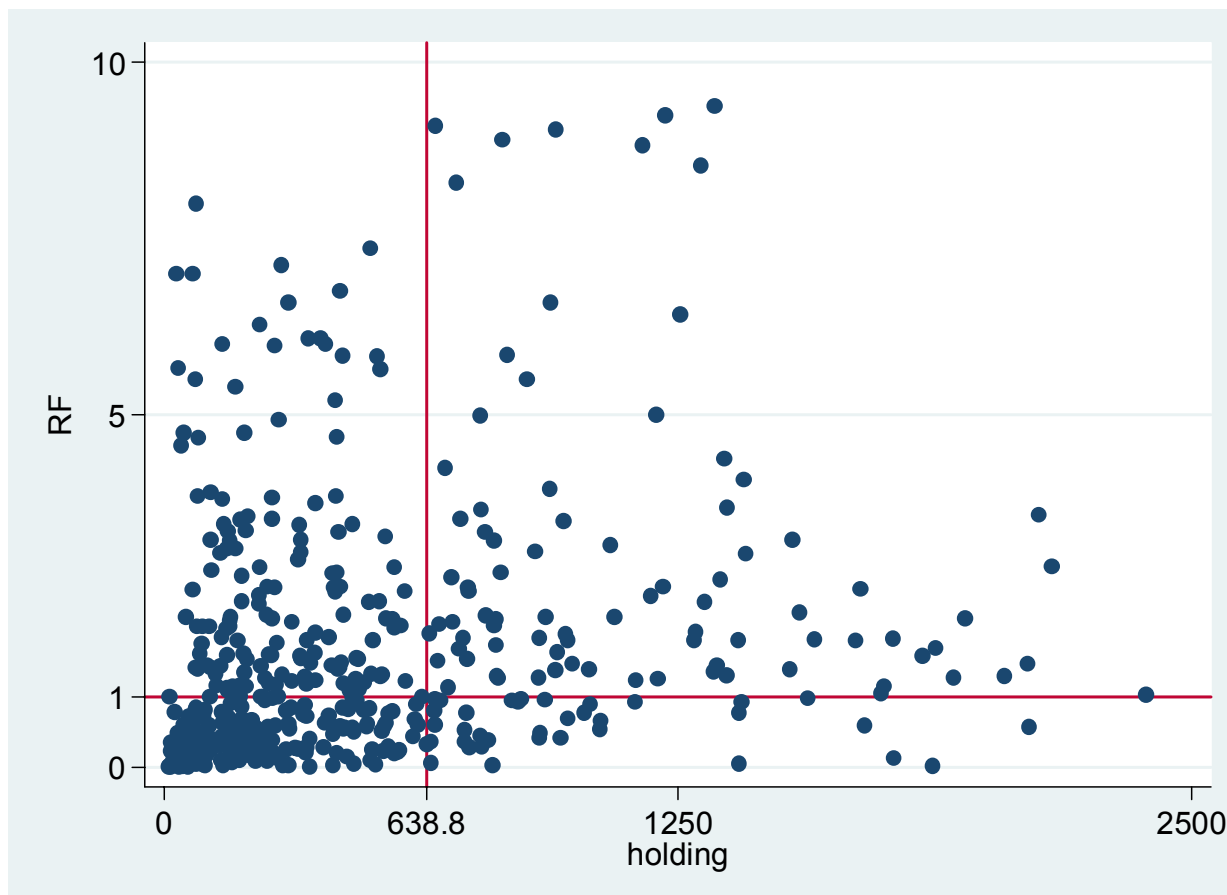
Nilde libraries distribution on the basis of their holdings



Small-medium libraries hold 60% of all journals



*Dispersion on the basis of RF and Holdings variables**



*For a better representation of the dispersion of the analyzed sample, data relating the highly severe *outliers* are omitted

Titles analysis

Is it better to subscribe to a journal rather than using ILL?

We found the answer through the statistical analysis of document transactions

Methodology

Unsuccessful transactions excluded

All delivery requests counted, even parts of books

Refinement and deduplication of the list



Documents supplied

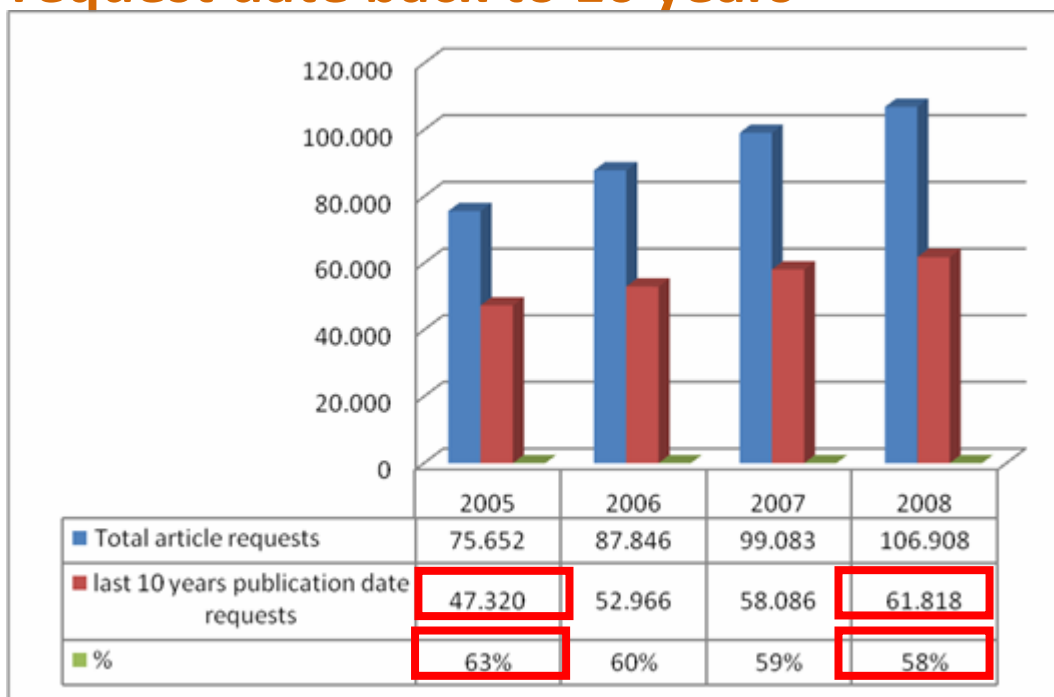
Year	Borrowing libraries	Articles supplied	N. borrowed article/library
2005	511	75.652	148,0
2006	552	87.846	159,1
2007	595	99.083	166,5
2008	651	106.908	164,2



Libraries ask for up-to-date documents

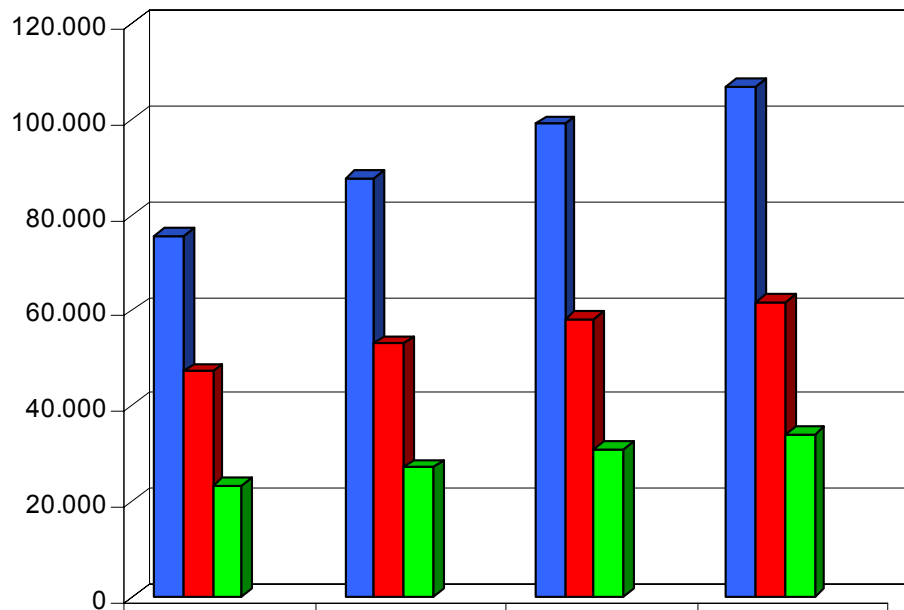
Biomedical and science libraries borrow up-to-date publications

We focused on requests of documents published from the request date back to 10 years



The percentage of documents (no more than 10 years old) is decreasing (from 63% to 58%), even if the numbers of total request are increasing

High-used titles



High-used titles represent 10% of all titles and amount for 50% of all delivered documents published during the last decade

■ Total article requests	75.652	87.846	99.083	106.908
■ last 10 years publication date requests	47.320	52.966	58.086	61.818
■ total requests for titles ≥ 20 requests*	23.273	27.084	30.859	33.989
% last 10 years requests vs total requests	63%	60%	59%	58%
% total requests for titles ≥ 20 (last 10 years) vs total requests	31%	31%	31%	32%

The core list of high-used journals

Year	Total titles requested	Titles requested $\geq 20^*$	Core titles* 2005-2008	%
2005	9701	6.308	371	4%
2006	11287	7.087		3%
2007	13299	8.087		3%
2008	14397	8.317		3%

*Only article published in the last 10 years

	n. of titles with requests/library average ≥ 3	n. of titles with requests/library average ≥ 5
2005	28	2
2006	29	2
2007	31	3
2008	40	1

Core titles, publishers, and Impact Factor

Core titles mainly belong to small publishers

Requests are increasing

Fewer and marginal titles belong to big publishers, usually out of “big deal” contracts or consortia

No correlation between the Impact Factor value (2008) and the number of ILL requests

NILDE libraries share their resources in a virtuous way

There is no evidence that ILL services are a strategy to avoid subscription

Many libraries are responsible for highest request titles, so the average number of requests for each library is low

Conclusions

This work sets the bar for future analyses conducted on the basis of the great amount of archived data
A future in-depth analysis about ILL titles and network performance will provide more highlights

NILDE seems to be a virtuous system of ILL
Libraries satisfy users' needs with a good cost-effectiveness rate

Libraries set up strategies to improve their performance

NILDE represents a strategic tool for decision-making

Further Developments

With regards to shared resources, further goals will be:

- **to map the national distribution of collections and evaluate the impact of ILL transactions among libraries of different disciplinary fields**
- **to aid in establishing journal acquisition priorities for libraries and for consortia**
- **to support choices about cancellations and weeding**
- **to set up procedures for the production of annual reports on ILL transactions as a useful tool in decision-making processes of acquisitions and weeding for all NILDE libraries and library systems managers**

Thank You for your attention

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